

till the autumn of 1907, when he removed to Aldeborough Hall, near Norwich. His death occurred on 1908 April 3. He leaves a widow, one son, and one daughter.

He was elected a Fellow of the Society 1872 December 13.

FREDERICK HOWLETT, a most persevering observer in one department of astronomy, was born in 1821, and died on the 30th of January 1908. After completing his Oxford course, he took holy orders at the usual age, and served first a curacy in the Lake District, where he became acquainted with the poet Wordsworth. The latter seldom refers to astronomy in his poems, but on one occasion he describes the solar eclipse (annular in some places, but a large partial one there) of the 7th. of September 1820, as witnessed from Lake Lugano in North Italy. From Westmoreland Mr. Howlett removed to Hurst Green in Sussex. Whilst there he was a near neighbour of Sir John Herschel, with whom he became very intimate; this intimacy had the natural effect of increasing his early taste for astronomy. Elected a Fellow of the Society in 1861, he took up very energetically the subject of solar spots, of which he obtained a large number of drawings by the method of projection on a screen. After a comparatively short tenure at Beckenham, Kent, Mr. Howlett was preferred to the rectory of East Tisted in Hampshire, where he continued for nearly thirty years, occupied in parochial work and in his astronomical studies, being also much interested in microscopy as applied to vegetable and to the lower forms of animal life. When he felt that he could no longer continue his observations, he presented a complete set of drawings of the solar phenomena, extending over more than thirty years, to the Society. A very interesting result of his observations is the possible untenability of what is called the Wilsonian theory of solar spots. Alexander Wilson, who originated it in 1769, was the first Professor of Astronomy at Glasgow, and a friend of Sir William Herschel, who visited him there. It was contested from the first, but gradually obtained acceptance, and found its way into a large number of popular books, with a rather fanciful drawing showing the effects of perspective on the supposed cavernous spots. Mr. Howlett found this appearance to be in many cases inconsistent with careful observation, thus concluding that when the spots are at a lower level than the surface of the photosphere, the depression is too shallow to exhibit the phenomenon in question with certainty. To quote Miss Clerke (*Hist. Astr.*, p. 155), "We can only infer that the forms of sun-spots are really more various than had been supposed; that they are peculiarly subject to disturbance; and that the level of the nuclei may rise and fall during the phases of commotion, like lavas within volcanic craters."

Mr. Howlett's amiable and kindly disposition greatly endeared him to his parishioners, and he was much esteemed by a large circle of friends. His wife was a daughter of Sir William Rawson (formerly Adams), and sister to Sir Rawson William Rawson.

She died at East Tisted, leaving no family; and soon afterwards Mr. Howlett resigned his living and went to reside at Clifton. An attack of paralysis rendered him a permanent invalid during the last three or four years of his life, but he continued almost to the last to take an intelligent interest in the progress of science.

He was elected a Fellow of the Society 1861 March 8.

W. T. L.

HENRY ALFRED LENEHAN was born at Sydney, N.S.W., on August 29, 1843. He was the son of the late Mr. Andrew Lenehan, a gentleman well known in the mercantile community of the young state. Mr. Lenehan was educated at Lyndhurst College, a local institution presided over by the Jesuit priests. On leaving school he remained sometime in his father's business, and afterwards proceeded to Queensland to take up an appointment in the Australian Joint Stock Bank. About this time, the early sixties, the State of Queensland was being surveyed for construction of railways, and Mr. Lenehan, having a penchant for such work, joined the survey. He returned to New South Wales in 1870, and received an appointment on the Observatory Staff under the late H. C. Russell, and so became one of the observers of the transit of Venus, 1874. He afterwards had control of the Transit Circle. In 1875, 1877, and 1901 he was Acting Government Astronomer during Mr. Russell's absence, and again, on the death of the latter, in 1903. On January 1, 1907, he succeeded to the appointment of Government Astronomer, a position he held at the time of his death, which occurred 1908 May 2. Mr. Lenehan was therefore connected with the observatory nearly thirty-eight years. At the time of his death he had nearly completed arrangements for the purchase of a 15-inch refractor for the observatory. Mr. Lenehan was a member of the Royal Society of N.S. Wales, served on its Council a considerable time, and was elected President 1905-6. In 1892 Mr. Lenehan paid a visit to Europe to study the working of various observatories. He leaves a widow and six children.

He was elected a Fellow of the Society 1894 January 12.

PERCY BRAYBROOKE MOLESWORTH, Major R.E., youngest son of Sir Guilford Molesworth, K.C.I.E., was born at Colombo, Ceylon, on the 2nd of April 1867. He was educated at Winchester College, and obtained his commission in the corps of Royal Engineers in February 1886.

After passing through the Royal Military Academy at Woolwich and Chatham (where he obtained the Fowke Medal), he was stationed at Fort Camden, Queenstown Harbour, until 1891, when he was ordered to Hong Kong for three years, and after his return he applied for service in Ceylon, where he was engaged in perfecting the defences of Trincomali. He joined the Solar Eclipse Expedition to India, organised by the British Astronomical Association in 1898, and towards the end of that year he was temporarily seconded in order to act as Secretary to Sir Guilford Molesworth, to visit and report on